

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A Lys-Lys binding site I which is a plasminogen fragment consisting of Kringle 1 to Kringle 3 of a human plasminogen with the N-terminal being lysine, which binding site binds to heparin and has the following properties:
 - a. a molecular weight of 38 kDa;
 - b. it is not glycosylated;
 - c. it binds to heparin at pH lower than neutral pH but does not bind to heparin at neutral or higher pH, under physiologic ionic conditions;
 - d. it inhibits lung tumor metastasis and lung tumor growth but has no ability to inhibit growth of endothelial cells of blood vessels;wherein said plasminogen fragment is prepared by;
 - a. preparing Lys-plasminogen from human plasminogen either by adding plasmin to a solution of human plasminogen or by incubating human plasminogen in the presence of ~~transexamic~~tranexamic acid to autolysis;

b. treating the Lys-plasminogen obtained in step
(a) with the elastase to produce fractions of the fragment
~~comprising~~ consisting of Kringle 1 to Kringle 3;

c. ~~identifying~~ subjecting the fractions of the
fragment consisting of Kringle 1 to Kringle 3 obtained in step
(b) to heparin affinity chromatography for selecting heparin-
binding fractions to obtain said plasminogen fragment which
binds to heparin.

2. (Currently Amended) A process for preparing a
plasminogen fragment consisting of Kringle 1 to Kringle 3 of a
human plasminogen with the N-terminal being lysine, said
fragment having the ability to inhibit lung tumor growth, but
having no ability to inhibit growth of endothelial cells of
blood vessels, comprising;

a. preparing Lys-plasminogen from human
plasminogen either by adding plasmin to a solution of human
plasminogen or by incubating human plasminogen in the presence
of tranexamic acid to autolysis;

b. treating the Lys-plasminogen obtained in step
(a) with elastase to produce fractions of the fragment
consisting of Kringle 1 to Kringle 3;

c. ~~identifying~~ subjecting the fractions of the
fragment consisting of Kringle 1 to Kringle 3 obtained in step
(b) to heparin affinity chromatography for selecting heparin-

binding fractions to obtain said plasminogen fragment which
binds to heparin; and

d. isolating the fragment which binds to heparin.

3. (Currently Amended) The process according to
claim 2 wherein ~~the fragment which binds to heparin is~~
~~recovered~~ the heparin affinity chromatography is performed by
passing a solution of the fractions of the fragment consisting
of Kringle 1 to Kringle 3 ~~a Lys-plasminogen lysate with~~
~~elastase~~ through a carrier to which heparin is coupled as a
ligand to adsorb those fragments which bind to heparin, and
eluting those fragments which do not bind to heparin.

4. (Previously Presented) A composition for
inhibiting lung tumor metastasis and lung tumor growth
comprising an effective amount of a fragment according to
claim 1 and, optionally, a pharmaceutically acceptable
carrier.